A POPULAR THEORY OF CREDIT APPLIED TO CREDIT POLICY

A preceding paper[1] was devoted chiefly to a discussion of the question whether the rise in the rediscount rates of the federal reserve banks had been instrumental in bringing about the credit contraction which followed the post-war expansion. An attempt was made to show that rate changes *per se* had not been efficacious, and it was furthermore pointed out that many obstacles lay in the way of the development of an efficacious system of rate control by the federal reserve banks. Since the date of writing (June, 1921) much additional evidence has been afforded of the lack of connection between the rates charged by the federal reserve banks to member banks, and the rates charged by the latter to their customers. It was observed that during the period when reserve bank rates were being advanced, many member banks were unaffected by the rise, because their charges were already far above the rediscount rates. Subsequent reductions in rediscount rates likewise have had little or no influence upon the charges of many member banks located in sections of the country where 8, 10, or 12 per cent is a customary rate. In short, over considerable portions of the United States it is a fiction to suppose that interest rates are either competitively fixed or responsive to the influence of changing demands from borrowers. Recognizing this fact, the article to which reference has been made above stressed the limited efficacy of any policy of rate control, however vigorous, under the conditions now existing. But it was suggested that in the leading money market centers a more effective control over rates could be secured by the federal reserve banks through an extension of open market operations with a view to equalizing the rates charged by member banks on different classes of loans, as well as with intent to bring about an expansion or contraction in the total amount of credit accommodation available.

This type of discussion takes for granted, or at least ignores, general questions of a much more fundamental sort. It does not ask, for example, whether it is desirable, if possible, for rate control to be exercised by a central banking system as an instrument of credit control. Nor does it ask to what extent such rate control is a matter of volition on the part of the central bank management. It does not attempt to decide whether changes in central bank rates can be arbitrarily enforced or whether they merely register a policy of conformity to some external guide or guides variously designated as the real or true rate of interest, the market price for capital, the natural rate,

[1] "The Efficacy of Changes in the Discount Rates of the Federal Reserve Banks," AMERICAN ECONOMIC REVIEW, Sept., 1921.

etc. To put these questions is to show how necessary it is to make clear at the start the theoretical presuppositions upon which any discussion of discount policy is to be based. A theory of mechanical or automatic fixation of interest rates through the unhampered operation of the forces of demand for and supply of capital (variously defined) makes untenable any concept of an independently initiated discount policy as a beneficent means of credit control. The sole aim of credit policy in that case would consist in somehow determining the natural, competitively fixed rates and then making them a guide to conduct. As a matter of fact, however, underlying most discussions of discount and credit policy there is an assumption, tacit if not expressed, that banks (and central banks in particular) are formative institutions, not merely instruments for the automatic execution of certain processes of exchange over which they have no control.[2] It is not necessary to attribute omnipotence to a banking system in order to conceive of it as an active agent in the direction, stimulation, or repression of industrial processes. But if there is to be any recognition of a problem of credit policy, it is necessary to conceive of banks as something more than passive agents recording market decisions and merely responding mechanically to demands made upon them.

The limits of the control exercised by any banking system, assuming it to be centralized and unified to a high degree, can perhaps be illustrated by analogy with those encountered by a monopolist who has been able to engross a necessity of life. The monopolist by his ability to control the supply of a particular commodity has a control over price that enables him within limits to stimulate or to discourage consumption. He cannot, however, fix his price without reference to demand on pain of overreaching his aim either by selling too little at too high a price or a great deal at too low a price. Similarly, to say that a banking system, to the extent that it can manipulate the supply of credit available in the market, exercises a positive control over industry is not to say that it can ignore the fact that it works within an industrial environment in which needs, "ever-changing in direction and intensity, are the motivating forces which condition all industrial activity." Nevertheless, the banking system of a modern industrial com-

[2]*Cf.*, however, testimony of Governor Harding before the Joint Commission of Agricultural Inquiry. He says on p. 362, part 13 of the Hearings: "The banks have to go along with the tide. I do not believe that banks can create conditions to the extent that people seem to think they can; I think the banks have to adjust themselves to conditions." Yet on p. 363 he is willing "to admit that if it had been possible for the Federal Reserve Board to advance its rates before it did.... in my opinion this runaway movement could possibly have been checked to a certain extent." Even with all the reservations that are inserted, the statements remain irreconcilable.

Cf. Hearings before the Joint Commission of Agricultural Inquiry, part 13, August 2-11, 1921.

munity so organized as to give power of direction into the hands of a central bank management is in a position to control the sale of a most important commodity: namely, credit. The prices charged for the use during a given period of time of the credit or purchasing power furnished by the banks (in other words the discount or interest rates) will depend upon the amount of accommodation the banking system is prepared to sell, that is, upon the supply of credit. This supply is, with the reservations just indicated, determined by policy in so far as law or custom does not interfere. And as additional supplies are often produced with only a negligible immediate cost, it is evident that the influence of policy upon supply is exceptionally direct and unhampered. But just as the monopolist has to experiment with prices to find out whether a given supply can be sold at a particular price, so a banking system desiring to sell the use of credit must experiment with discount rates. If, at the rate fixed, the demand of those willing to pay exceeds the amount of purchasing power that the banking system deems it politic to sell, either the rate must be raised still more or else refusal or restriction of loans must ensue. On the other hand, a reduction of rates with a view to stimulating the sales or rather the hire of purchasing power may fail of its purpose or meet with very feeble response. Hence, even under conditions in which control of rates is absolute, it by no means follows that control of the amounts of credit supplied (the fundamental objective) can always be secured. Only under conditions in which demand is sufficiently sensitive to enable the banking system to dispose of as much or as little credit as it desires by varying discount charges, is it possible to enforce a credit policy through the instrumentality of discount rates alone.

Implicit in all discussion of credit policies are theories as to the nature of capital, credit, and interest. To avoid confusion, these concepts need to be expressly defined and consistently adhered to, as the most serious obstacles to a lucid treatment of discount and credit policies have grown out of the tendency to use the terms in one sense for purposes of discussing money market phenomena and then to shift over to certain esoteric concepts for purposes of general economic theory. The position here taken is that the only definition of capital which has any validity *for the purposes of a discussion of discount and credit policy* is a definition which makes the terms capital and credit interchangeable and identifies them with the purchasing power sold or, more exactly, hired out by banks to borrowers who want credit for all sorts of purposes.[3] Whether this purchasing power is taken in the

[3]The opening sentence of the second paragraph (p. 471) of the article in the American Economic Review referred to above seems, if taken alone, to be directly opposed to the position maintained in this paper. The subsequent discussion, however, makes it evident that the statement was directed against the vagueness of a

form of cash, bank notes, or checks against deposits is irrelevant from the point of view of the present discussion. Practically speaking, one can ignore any direct loans made by individuals in possession of hoarded money, and all other loans are made through utilization of the funds provided by the banking system. Even savings deposits whose disposition is subject to the control of individual investors can only be utilized in the form of purchasing power transferred to borrowers through the medium of banks. Interest has already been defined as the price paid for the use of the purchasing power furnished by banks to buyers or borrowers for a period of time.

The above definitions at least have the virtue of recognizing the fact that a study of money market phenomena has to proceed in terms of what is actually bought and sold on that market. This usage receives conventional support, too, from the growing disposition among economists to accept definitions of capital and interest based upon money market terminology as theoretically valid for a fundamental discussion of the problems of credit policy. There are, of course, countless illustrations of thoughtless acceptance of this terminology found in textbooks on money, banking and general economics, but the writers are not concerned with recognizing all the implications of their definitions and using them to test the validity of their views concerning discount policy and credit control. H. J. Davenport is conspicuous among American economists for unequivocal assertions of his belief in the theoretical soundness of definitions of capital and interest conceived entirely in terms of the money market. Unfortunately he has touched only incidentally and briefly upon the application of his definitions to questions of credit policy. In an article published in the *Annalist*, for February 28, 1916, entitled "Divergent Views of Interest," however, he leaves the reader in no doubt concerning his belief in the power of a banking system to function as an instrument of credit control. Having denied emphatically that there is any measurable connection between the amount of the "capital," "cash," "funds," which the business man borrows, and the productive equipment of a community (which Davenport calls the economist's capital), he goes on to say: "Equally clear is it that the available loan fund at any time is chiefly a matter of the disposition of the banks to do this discounting; and this disposition is determined mainly by the ease of their reserves and not at all, or only remotely and partially, by the amount

particular type of approach to the subject. The concluding sentences of the paragraph, in which it is said that the borrower buys the services of the bank, and that the rate is the expression of a greater or less inclination on the part of the bank to sell its services, are in general conformity with the arguments set forth in this paper. But the earlier statement is itself open to a charge of vagueness due to the failure unequivocally to identify the services sold with *purchasing power*.

of machinery and raw material in the country." If concrete wealth is related to the case at all, he holds, it is merely as bearing upon the amount of accommodation that banks will grant to applicants. Interest rates, then, "report merely the condition of the loan market —not, even in the main, the volume of the existing supplies of loan funds, but rather the power and the disposition of the banks to create new funds. Credit has its cost of production as truly as wheat— costs varying under varying conditions of actual reserves and of estimated risks."

Another consistent spokesman for the theoretical soundness of the popular notion that capital, credit, and interest are money market phenomena is Schumpeter.[4] In his *Theorie der wirtschaftlichen Entwicklung* he asserts that money market rates are the only interest rates; that the money market is the same thing as the capital market and that there is no other; that the capital market is the market in which purchasing power is bought and sold. Capital creation, he holds, is the creation or new creation of credit means of payment, and

[4] J. Schumpeter, *Theorie der wirtschaftlichen Entwicklung* (Leipzig, 1912). See especially the section entitled "Der Geldmarkt," and chapter 5, "Der Kapitalzins." Schumpeter's treatment offers many invaluable suggestions to a student of credit policy, even if one is willing to accept his highly unrealistic concepts of static and dynamic societies, and to think of interest as a sort of tax upon entrepreneurial profits growing out of new productive combinations—a dynamic phenomenon. Schumpeter's emphasis is all placed upon this entrepreneurial demand for purchasing power which arises because of the possibility of utilizing it in new ways. In a static society, or one in which producers owned all the goods that they required, there would be no interest, according to his characteristic use of that term. However, he concedes that even in his static society, premiums might be paid either by borrowers or by lenders in connection with particular transfers of purchasing power, according to whether the desire of the parties to the bargain happened to be stronger for present purchasing power or for the assurance of future purchasing power. Schumpeter admits that in point of fact the so-called static as well as dynamic demands for purchasing power influence the actual rate of interest in the money market but he regards the former as unimportant. It is obvious, however, that no realistic theory of interest can ignore or even minimize the influence of non-industrial demands. Especially at the present time it is evident that a working definition of capital or credit cannot conceive of it as purchasing power sold chiefly to entrepreneurs who are the determinant factors on the demand side in the fixation of interest rates. For an understanding of the problems of the money market, it is necessary to remember that funds are loaned to all sorts of customers irrespective of the uses to which the borrower expects to put them. Davenport has done good service in pointing out time and again that loans may be obtained for the purpose of bribing a city council as well as for paying wages, or buying machinery. It is evident from the brief outline given, that Schumpeter assigns to banks as the "producers of and dealers in purchasing power," the determinant rôle on the supply side in that money market in which interest rates are fixed. He says, p. 275: "We can see then in practice the working of both factors in the market; in the case of the most developed money markets, quite clearly; in other instances, less so. We can see how the industrial need for credit is expressed, and how the institution of banking sometimes supports and encourages it, sometimes tries to restrain it, sometimes refuses to give it further satisfaction."

interest is the price paid for this purchasing power as a means of control over production goods.

Gustav Cassel in his *Theoretische Sozialökonomie* (Leipzig, 1918) and in more recent articles intended for popular consumption has attracted world-wide attention to his proposals, which have made a forceful appeal because he has tried to apply a consciously held theory of capital and interest to a solution of the problems of discount policy and its corollary, credit control. He too takes the position that interest is a price paid to secure control over "capital" for a period of time (*cf.* pp. 167 and 174, *Theoretische Sozialökonomie*). And capital (*Kapital*) he has previously defined (p. 44) in terms of "money," as opposed to *Realkapital,* which consists of material goods still found in or concerned in the production process (p. 167) (die sich noch im Produktionsprozess befinden). Subjected to analysis, however, Cassel's definition of capital seems to be dissociated from reality quite as much as a definition which conceives of capital in terms of material goods already adapted to the purposes of production —a concept which he has subjected to destructive criticism.[5] Cassel entertains the idea that there is somewhere a true rate of interest and that it should be the aim of banking policy to bring bank rates into conformity with this true "capital" rate. His assumption is that borrowed funds are devoted chiefly to purchasing durable production goods, and the true rate of interest seems to be that rate at which demand will take off the supply of savings in pecuniary form. But how can this true rate be determined? Cassel admits that it is immediately and powerfully influenced by bank rates of interest. He attempts, however, to show the deleterious social effects of keeping bank rates of interest below the true rate, and comes to the conclusion that if the banks only hit upon a rate or rates that leave prices unchanged that will be the true rate. It will be observed that this true rate can only be reached by definition since it has no existence in fact.[6]

[5]See especially pp. 213 and 214. One is puzzled to know just what rôle the banks play in Cassel's money market, especially as he says later (p. 378) that "the bulk of the funds available (*die Hauptmasse der Kapitaldisposition*) for taking over concrete capital (*Realkapital*) is furnished by savings capital. Only a small part of this need for capital funds (*Kapitaldisposition*) can be furnished by the banks by the giving out of bank currency." Now Realkapital as previously defined includes circulating as well as fixed capital, and even the most uncompromising opponents of the practice of lending bank-created funds as opposed to savings for the purpose of securing control over durable capital goods, would concede their utilization in the purchase of circulating capital. It is probable, however, from statements previously made (*cf.* pp. 213-14, cited above) that Cassel is thinking of demand for funds with which to buy durable capital goods as set off against supply in the form of pecuniary savings. The rate that will suffice to take off these savings is then the true rate to be aimed at.

[6]*Cf.* p. 380 especially. The effect upon prices of a failure to keep actual bank rates in line with true rates as here defined is explained as follows. The policy of

Notwithstanding the notable exceptions to which attention has been called, the majority of economists are certainly not yet inclined to make the money market the point of departure for an investigation of the nature of credit phenomena. But the majority of bankers and business men seldom employ any other terminology in their discussions of such problems. Indeed, to talk effectively in other terms would often be impossible. To be sure, the Federal Reserve Board and the reserve banks have rather consciously tried in their official pronouncements to place emphasis upon the things that credit will buy, to conceive of credit as but a reflex of the demand for productive goods and services—as dependent somehow upon the physical volume of goods and in no sense a creation resulting from policy. Nevertheless, Governor Strong testifying before the Joint Commission of Agricultural Inquiry stated quite positively his belief that "credit is a commodity just as any thing else that is bought and sold and commands a price which is fixed by the laws of supply and demand." The statement is quoted because it is typical, representative it is believed, of the views of a majority of bankers and of the lay public, and in accord with the position which this paper tries to maintain. It may be added, however, that such statements are seldom supplemented by adequate analyses of the nature of the supply of and demand for credit.

In the discussion of discount and credit policy one gets nowhere by the use of definitions couched either in terms of goods and technological processes, or in terms of abstinence. Granted that demand for credit usually grows out of a conviction that the purchasing power desired can be used "productively" (*i. e.*, profitably), it may not be; and discount policy determines whether the attempt shall be made or not. The marginal demand may come from a man who thinks mistakenly that he can use a loan profitably. Below the margin may be overcautious potential borrowers who could have used funds with

the banks of placing out their funds at the old rate when profits are rising will, it is said, send up the prices of capital goods, thereby shunting purchasing power toward those goods to the detriment of consumption demands. The apportionment of the purchasing power of society between capital goods and consumption goods is in this case altered just as if a growing disposition to save had arisen in the community. So far as one can see, what is being said here is that the amount of purchasing power directed toward all purposes except immediate satisfaction should find its limit in the amount of the savings of the community. Certainly no counsel could be more vague or seem less related to reality. And to repeat, it is hard to see how the banks, theoretically speaking, can perform their characteristic functions at all without being regarded as intrusive, disturbing factors. Yet the conformity of bank rates of interest to an elusive true rate of interest is to constitute a method of stabilizing the price level. Cassel is naturally fully cognizant of the fact that the general price level is not determined exclusively by monetary factors, but nevertheless he is disposed, especially in his later popularized writings, to minimize the influence of incalculable factors on the demand side and to talk as if changes in the price of credit acting through supply could be counted upon to effect the most delicate and instantaneous adjustments.

profit. The demand for loans comes from the ill-informed, as well as the astute—it may be characterized by over-optimism or over-pessimism. On the other hand, no explanation of the supply of loanable funds can be related to individual rates of abstinence. Such funds may represent in part purchasing power withheld from the market by acts of individual self-denial. But the supply will also be augmented by created banking credits. Indeed, as the banking system is capable of supplying funds by creation of claims, it can take from some and give to others, thereby reducing immediate ability to consume of people who are not consciously saving. War loans are an obvious and extreme illustration of enforced saving, when financed by means of credit inflation.

Theories that base concepts of capital upon categories of goods, that conceive of savings as existing in the form of such goods, and think of interest as payments in goods, dependent either upon a somehow defined capital productivity or reflecting a universalized rate of time preference, fail therefore to make any convincing connection with the facts of the money market. It is obvious that one gets nowhere with productivity theories of interest, unless they are conceived in terms of price; and price changes bear no measurable relation to physical magnitudes. Neither have theories of interest based on time preference any value for purposes of the present inquiry, even if they have metaphysical content. No light is thrown on the causes of the fluctuations in call loan rates, for example, by saying, as does Fetter, that "the market-rate of interest (after due allowance for risk and other deductions) registers a prevailing price for timeliness, which pervades the whole economic structure of society."[7] Nor does Fisher help to clarify the discussion or to relate it in any convincing fashion to the money market when he says: "The rates of preference of different individuals must be equal to each other and to the rate of interest in the market......The rate of interest must be such as will equalize supply and demand, or exactly clear the market."[8]

To be sure, the money market functions as part of a complex economic organization for the production, exchange, and distribution of goods and services. It cannot be conceived of as working in isolation; but on the supply side, the commodity which it offers for sale—namely, purchasing power—is subject to control through policy.[9] Hence

[7]*Cf.* F. A. Fetter, *Economic Principles,* vol. I, p. 312.

[8]*Cf.* I. Fisher, *The Rate of Interest,* p. 150.

[9]In an article by C. A. Phillips on "Control of Bank Credit," published in *The Annals of the American Academy of Political and Social Science,* January, 1922, an attempt is made to distinguish between actual and natural rates of interest by defining the former in terms of money and the latter in terms of goods. It is said (p. 198) that "too little effort has been made to bring the market rate into harmony with what may be called the *natural* rate of interest, the natural rate being the rate

prices charged, that is, interest rates, are influenced by policy, although many factors of a material and personal sort affect the demand for purchasing power coming from borrowers. Banks may as a matter of precaution, and usually do, test the desirability of transferring purchasing power to a borrower by determining whether he is in possession of goods awaiting transfer, transformation, or utilization. But it is, to repeat, a matter of policy whether an underlying basis of goods is insisted upon in granting a loan and whether conditions are made in connection with the loans, such as that the borrower must control salable goods or have expectation of receipts from goods already sold.

In the definitions of capital and of interest accepted for purposes of the present inquiry, there has been no attempt to distinguish between the uses to which borrowed funds are to be put, or to differentiate according to the length of time for which funds are wanted, because it is not thought that a definable distinction can be made.[10]

at which the supply of and demand for loanable capital goods, as distinct from 'money,' may be equated." What meaning inheres in this distinction? What are loanable capital goods? There are at any instant of time certain available supplies of goods, some of which are in condition either to be turned over to consumers or to be used in furthering productive processes, while other goods may already be definitely adapted to specific needs, productive or otherwise. There are also stocks of raw materials that may serve a great variety of purposes. But even if one accepts a distinction between capital and non-capital goods, there is nowhere at any time a determinable supply of capital goods waiting to be taken off by demand, somehow defined in terms of goods. It may be asked whether demand for "loanable capital goods" can possibly be defined in any but monetary terms. And if demand is conceived of in terms of purchasing power, is it not an effective demand irrespective of the way in which it has been secured? The next sentence concedes the elusiveness of these natural rates for loanable capital goods by saying that "although it is impossible always accurately to ascertain what the natural rate of interest is, it is not difficult to detect a wide disparity between the market and natural rates." And since the "natural" rate, just as Cassel's "true" rate, escapes measurement, the writer shifts his ground and by implication redefines the natural rate as a rate which will prevent price changes. He says: "The disparity between the market and the natural rates during the early period of credit expansion under the operation of the Federal Reserve act, was due measurably to an inflationistic policy with a low rate of rediscount as its central feature."

[10]The attempts of the Federal Reserve Board in its rulings to distinguish between a commercial loan and an investment are ingenious, but not always convincing. Time cannot be made the test, because every loan made by a federal reserve bank is for a short period. The commodities bought or handled with the funds obtained cannot be the test. The tests are related to motives of borrowers and sometimes external tests whose logic it is hard to follow. For example, in an article on "Eligibility for Discount," by C. L. Powell, *The Annals,* Jan. 1922, p. 109, it is said: "A note, the proceeds of which is used for tilling or draining farms, may be classed as agricultural paper and is eligible for discount." But "silos are permanent improvements, and notes given for their purchase are not eligible for discount."

"A note given for the purchase of a motor truck by a farmer is clearly held to be eligible for discount, as agricultural paper, but notes or trade acceptances given

Yet a good many economists who are prepared to talk exclusively in terms of money and purchasing power when discussing short-time loans, and who are furthermore willing to concede that rates charged for short-time funds can be regulated by policy, shift their position when investigating the influences regulating long-time interest rates—the rates at which they conceive the values of durable goods to be capitalized.[11] It is believed, however, that the method of approach to the problem of long-time rates should be substantially the same. Problems of policy arise in this field also—indeed, such problems are but variants of the general problem of credit policy which should be viewed as a whole.[12] The so-called long-time rate has no existence apart from the money market any more than have short-time rates. It is a derived rate based on an average of day-to-day rates actually charged in various long-time contracts negotiated in the market. Such averages are the ones applied to the valuation of income bearers and it is not believed that rates of capitalization exist apart from the rates actually paid in the money market. At least, if they do, they are realities that are without tangible expression. The so-called long-time interest rates (and the distinction between long and short is of course arbitrary) have been made the subject of many unwarranted generalizations by contrast with short-time rates. Not only have long-time rates usually been accorded a metaphysical reality denied to short-time rates, but even when the discussion has proceeded in market terms they have been differently conceived, thought of as averages over a period of time, rather than as prices constantly changing. It may be conceded that fluctuations of rates in long-time contracts are as a rule less extreme than fluctuations of call loan rates but comparisons

in the purchase of motor trucks of a corporation engaged in the business of furnishing motor transportation are not eligible for discount, as such trucks represent in a large extent the corporation's capital investment."

[11] *Cf.*, for example, D. Friday, *Profits, Wages and Prices,* chapter on "The Rate of Interest."

[12] In this connection it may be noted that it is hard to see how any question of credit policy can arise—apart, that is, from the necessity of maintaining legal reserves—if one holds that all genuine commercial loans are self-liquidating and that banks should confine their operations to loans of such type. The only question then becomes one of rigid scrutiny of the paper offered or investigation to determine whether proceeds are intended for current uses, in cases where the paper does not reveal the type of transaction. If paper is unimpeachable, or so appears, ought not loans and discounts to be made as a matter of course? What should be the policy of central banks under such circumstances? The belief sometimes expressed that the federal reserve banks, for instance, should accept all "good" paper offered to them, would, if made the basis of policy, deprive the system of every vestige of effective control. Policy has in fact led to refusal to grant loans, and the graduated discount rates imposed upon certain member banks in some sections were a timid substitute for downright refusal to grant *more* credit, irrespective of the type of paper being offered for discount. These graduated rates, reviled as an instrument of exploitation, were actually a concession to the clamor for more credit.

are seldom made in proper fashion. Long-time interest rates change perpetually as do call rates, and such changes are only known by the interest which the borrower of purchasing power agrees to pay at the time the contract is made. Not only will the long-time interest rate of today be something different tomorrow but its fluctuations depend upon and likewise influence other market rates. Any investment banker knows that the call loan rate will affect the terms on which long-term loans can be effected. And long-time financing operations contrariwise affect call rates. It is hardly necessary to call attention to the effects of policy in reducing the long-term rates at the time of the Liberty Loan flotations, yet there persists this disposition to believe that long-term (investment) rates are largely determined by forces conceived to be "natural" in the sense of being divorced from money market influences.

There is, however, another reason why investment activity is usually excluded from the field of credit policy, even by writers who think of all forms of credit in terms of purchasing power. There exists a widespread belief that a reliable measure of the amount of purchasing power that can be safely loaned for long periods of time is found in existing time or savings deposits of all sorts and that all that banks or financial institutions need to do is to act as intermediaries in transferring purchasing power from those who save to those who want to spend such purchasing power in a particular way.[13] Usually it is felt that this purchasing power should be directed toward durable production goods. This attitude assumes a rigid segregation of savings deposits from other bank deposits which notoriously does not exist. But, after all, back of the question whether such a policy of segregation is possible, there lurks a more fundamental question as to whether it is always desirable to devote savings deposits exclusively to the purchase of those classes of goods whose utilization will expand industrial equipment and whether all "created" banking deposits shall be rigidly diverted from such cases. Now every analysis of the nature of investment demand on the technological side encounters complexities that elude solution. There are greater, socially speaking, more significant differences existing between various types of recognized investment demand than between certain types of investment demand and certain types of commercial demand for credit. Purchasing power that is directed toward the purchase of production goods in durable

[13]As a matter of fact it is very hard to say what proportion of time and savings deposits actually represent a long-time abstention from purchasing on the part of their owners. A considerable portion of such deposits is likely at any time to be heavily withdrawn and devoted to immediate purchasing of all sorts. The insistence that savings institutions shall become investors in short-time paper, such as acceptances, as a means of protection against unexpected withdrawals is evidence of the fact that such deposits are in part regarded by their owners as demand deposits.

form has a very different effect from purchasing power directed toward the raw materials out of which such goods are to be made, or directed toward control of the services of land and labor to be used in connection with productive activities. Loans obtained against mortgages on land, when used to buy more land, are in a very different category from loans against mortgages, whose proceeds are used to improve the land. Given the fact, therefore, that formal classification throws so little light on the social and economic results of lending operations, it may be concluded that a credit policy cannot be restricted to a formally defined field of borrowing, if it is to be really effective in the control and distribution of credit, and if it is to prevent price maladjustments resulting from undue borrowing by certain elements in the community. Suppose, for example, that a hard and fast rule of using all savings to purchase limited categories of production goods were practicable and enforceable. It might lead to overstimulation of the buying demand for such goods at the expense of the markets for raw materials and finished goods. On the other hand, the amount of savings might be so limited as to restrict unduly the demand for production goods. In either case, the results would be disastrous not only to investment but to commercial banking interests whose "liquid" loans are only liquid to the extent that fixed capital functions, "circulating" capital circulates, and both productive consumers and ultimate consumers buy as expected.

Before the war, German writers on finance perpetually complained that in Germany long-time loans carried unduly high interest rates as compared with short-time loans. What was the explanation? Purchasing power created by the banks and used in the market for short-term loans had been sufficiently plentiful to meet demands on the basis of low rates. But in the market for long-term investments, the supply of purchasing power offered for sale had been more or less limited by reference to the amounts of savings deposits, so far as they could be estimated. At any rate, the relatively extreme divergence of rates indicated a hindrance of some sort to the competitive shifts that would otherwise have tended to reduce the unusual spread existing between long and short-term rates. As a matter of fact, this situation was tending to correct itself by a growing policy among the banks of extending short-time accommodation to favored borrowers who wanted it for long-time purposes. This tendency was an inevitable outgrowth of a maladjustment which it served to correct. Hence it is curious to find Herr Heiligenstadt, president of the Preussenkasse, deploring the tendency and at the same time calling attention to the unfortunate social and economic effects of an undue spread between long and short-

time rates.[14] In an article on "Der deutsche Geldmarkt," (pp. 76-77), he says: "In any given condition of industry, there must exist a definite relation between fixed and circulating capital......Against every violation of this economically necessary relationship between fixed and circulating capital the money market will eventually react with the greatest force...... The weakening of the national circulating capital is the root of our economic embarrassment." That is, the writer thinks the tendency has been to put too much of the national circulating capital which ought to be maintained in liquid form into fixed investments. But, to repeat, since the saving disposition of a people is not particularly amenable to policy, an evening-up process either involves encouraging the practice complained of, or else limiting as a matter of policy, the supply of purchasing power offered for short periods of time. J. Plenge, in a book on discount policy published in 1913, at least touches upon the possibility of modifying the spending and saving habits of a people to make possible a more rapid creation of "capital" and thereby bring about an equalization of long and short-time interest rates.[15]

It must be admitted that even in countries having highly centralized commercial banking systems, the control of the direction of savings funds is not so immediately subject to the decision of bankers as are short-time funds, because individuals have a greater direct voice in dictating the disposition to be made of their savings. But after all, their choices are determined by the opportunities for investment offered by investment bankers and financing agencies dependent in their turn upon loans furnished by the commercial banking system. Consequently individual savings are in good part forced into predetermined channels. There are innumerable points of inevitable contact moreover between long-time and short-time lending operations. Attention may be called to some of the best-known types. Surpluses of corporations, intended eventually to be used in permanent investment expansion, find temporary utilization in purchases of bills or other short-

[14] *Cf.* C. Heiligenstadt, "Der deutsche Geldmarkt," *Schmoller's Jahrbuch,* March, 1907; also, *Fragen des Geldmarktes* (Berlin, 1906).

[15] J. Plenge, *Von der Diskontpolitik zur Herrschaft über den Geldmarkt.* (Berlin, 1913), p. 222. "Precisely as involuntary and unplanned is the equalization of the capital market in each of its chief reservoirs. No care is taken that this year, the perhaps growing capital needs of state and municipality or the demands of industry facing new technological tasks, shall be satisfied by increased savings. No effort is made in decades of increasing capital demand to see that the consumptive habits of the people make it possible to bring about a more rapid creation of capital. On the other hand, just as little attempt is made in a period of very rapid increase in the supply of credit capital, to see that the need for circulating capital in trade and industry correspondingly increases, with the inevitable result that the introduction of this new capital which is at the same time new money, would bring about inflation in its true sphere of effecting the actual transfer of goods, which however, it does not do when it flows off partially into investment channels."

time securities. Securities may be bought with savings or their purchases may be financed through the proceeds of call loans. Funds transferred to a borrower who expects to use them for long-time purchases, may be temporarily reloaned in the short-term market. And there is also the familiar procedure of borrowing for short periods of time with every intention of eventually funding the short-term obligations into long-term loans.[16]

Despite recognition of the prevalence of this practice of perpetually shifting purchasing power between long and short-time investments, there is a widely held belief that inflation is sure to result unless investment operations can be limited to or be measured by the savings of individuals. That leads one to a consideration of how inflation is brought about and whether it necessarily results from an extension of commercial banking operations into the investment field. Sometimes it is said that the latter type of loan is inflationistic because it is a claim on wealth in general instead of being a claim upon specific goods passing through various production stages. The answer to this is that credit of every sort is a claim on wealth in general in the sense that it is purchasing power which can be used to buy things, no matter what the nature of the transaction to which it is ostensibly tied or what the type of property upon the security of which the bankers have been willing to transfer the use of purchasing power either for longer or shorter periods of time. Long and short-term credit is in essence the same. It is easy to think of a long-time loan as a succession of short-time loans, renewed at intervals. And such loans can in individual cases generally be "liquidated" at any instant by transfer of the property bought with the proceeds of loans even if it is in fixed capital form. Of course, such liquidation cannot go beyond customary proportions. On the other hand, short-term loans are often long-term loans, technically payable at intervals. And in any case, even when the proceeds of loans have been used to buy so-called circulating capital goods as, for example, raw materials which are to be worked up and transferred by sale, or commodities which are merely to be shifted unchanged from one distributive stage to another, it does not follow that liquidation can be forced any more than it can be in the investment field. The conclusion is that credit of one sort is not of necessity any more inflationistic than credit of any other sort. Inflation follows when the expansion of credit (purchasing power) *in toto*, no matter how used, proceeds at a rate so rapid that the effective pecuniary demand directed toward all sorts of goods, durable and transient, and toward all kinds of services is more than sufficient to take off supplies of these things at current prices. It is undeniably

[16] *Cf.* J. Plenge, *Von der Diskontpolitik zur Herrschaft über den Geldmarkt*, pp. 219-226.

true that the disposition to extend credit to persons prepared to pledge property which they have no desire or intention of selling has an inflationistic tendency so long as new forms of such property are being brought into the credit system and used to serve as a basis upon which to request loans.[17] The difficulty with such loans is that considerations of individual safety rather than questions of general policy are likely to determine whether they shall be granted or not. The amount of such applications should of course be controlled, irrespective of the excellence of the underlying security. And the purposes to which the proceeds are to be devoted should be scrutinized, as in the case of other types of loans.

Another sort of theoretical objection to the attempt to apply a credit policy to the market for long-time loans has, curiously enough, been raised by H. G. Moulton, the economist who has done so much to show the intimate dependence of investment operations upon the commercial banking system as it is commonly conceived of. He believes that a discount policy intended to control inflation by raising rates will have the effect of raising the rents of goods of a durable sort such as buildings, for example. He argues that a scarcity of such goods will follow because of increased expenses of production growing out of the higher interest rates that have to be paid for borrowed funds.[18] This flies in the face of the facts of valuation as applied to durable goods in a period of rising interest rates and appears to be theoretically invalid for the following reasons. First, the interest on borrowed purchasing power is not an invariable element in cost of production and cannot be directly determinant of price. Changes in interest rates exert an importance according to the more or less of borrowed purchas-

[17] *Cf.* J. A. Hobson, *Gold, Prices and Wages* (p. 91): "Only when the bulk of the industrial world is so far standardized in its business structure that the greater part of those forms of wealth capable of supporting credit have been brought into the credit system, is there any sure prospect of a reduction in the pace of growth of credit acting on world prices."

[18] *Cf.* H. G. Moulton, "Banking Policy and the Price Situation," *Papers and Proceedings of the Thirty-second Annual Meeting of the American Economic Association,* p. 170: "While an increase in the rates of rediscount would curtail the volume of outstanding loans, it should not be overlooked that it will accomplish other things as well. For instance, it will increase the costs of conducting business all along the line. This increase in costs must be reflected either in increased prices or in decreased profit margins. It is necessary that we clearly perceive that one result of the increase in rediscount rates will therefore be to curtail the possibilities of business expansion during the coming year. There is a tremendous need for the construction of additional houses, additional railroads, additional public utilities, and additional industrial equipment in order to permit us to recover from the effects of the curtailment of construction operations during the war. To raise the rates of discount at the present time will increase the cost of such construction at a moment when such building operations are already being seriously retarded in consequence of the enormously high cost of construction.

Cf. Criticism of this contention, *ibid.,* p. 181, by G. W. Dowrie.

ing power employed. The effect upon price is indirect. Higher interest rates *per se* tend to make for lower values of building materials, to the extent that the higher prices charged for the use of purchasing power restrict demands for such materials. The uses of completed buildings may remain dear under such circumstances because of scarcity of the use-bearers but the higher rates will not hinder but rather help to overcome this scarcity by reducing the costs of new buildings. Hence a discount policy which aims to control price inflation in the case of goods intended for a rapid turnover ought to be applicable to goods which are to be embodied in more permanent forms.

The general conclusions that have been reached are merely preliminary to a consideration of the special problems of policy that confront the federal reserve system. Since the grant of credit is inevitably and in the nature of the case a matter of policy, it should be conscious and unified, and for that reason there should be a wide power of direction and control lodged in the hands of the management of any central banking system. To be fully effective, furthermore, this control must embrace the market for investment loans as well as for short-time loans. If this responsibility is recognized and accepted, the existing mechanism must be adapted to this end. Hampering customary or legal restrictions must be abrogated or else the central bank authorities must disavow the responsibility that the public uncritically insists upon placing on them. If the contention previously advanced is a correct one, namely, that it should be the aim of policy to maintain a balance between investment and short-time lending operations, the federal reserve banks ought to have some means of influencing the apportionment of credit supplies between these uses. In that case if the interest rates for long and for short periods showed a marked spread, it would be a signal for interference. To illustrate: suppose the reserve banks were permitted both to rediscount and to lend directly against stock and bond collateral. The reserve institutions would then be in a position to make their influence felt in the general investment market, since they could at discretion raise or lower rates charged for carrying loans of this type, in relation to other classes of loans. The problem of credit control, is after all, not simply a matter of increasing or decreasing the credit supply *in toto* but of seeing that it is apportioned adequately among the various groups of borrowers. Unduly high or unduly low rates charged for particular types of loans may bring about much worse maladjustments than either too great liberality or too great niggardliness of an impartial sort. It is recognized of course that at present the control of the federal reserve system is not only imperfect in relation to the existing membership but also incomplete, as a result of the existence

of large numbers of non-member banks that have but remote connections with the system. It should not be forgotten, however, that the distinction between members and non-members is not based upon differences between banks doing a primarily commercial business on the one hand, and investment institutions on the other. Many banks doing an extensive commercial business are excluded, while large trust companies whose investment activities are of preponderant importance have been taken, indeed urged, into the system.[19]

Color has been given to the belief that credit policy can only be effective in the market for short-time loans by the fact that in the case of European central banks, discount policies have been consciously tested out in central money markets, and the literature on the subject has been confined chiefly to a description of the methods employed in controlling a very limited class of operations carried on by the large banks and credit middlemen in immediate contact with the central banks. The bill market in large financial centers (and New York City is no exception) offers an extreme case of sensitive response to central bank rate changes. But that is no reason why attempts to influence outside market dealings should be confined to that limited field. In New York City, for example, dealers in acceptances, as distinct from accepting banks, operate almost exclusively with borrowed funds. Their profits consist in acting as intermediaries in shifting loans from one lender to another (*i. e.*, from the accepting bank that grants credit by accepting to another bank that is willing to purchase the acceptance). If the dealer who buys the bills as a means of effecting these transfers has to pay as high a rate on the funds borrowed for that purpose as he subsequently pays in reconverting his loan into purchasing power, he makes no profits. And it is very easy to suffer losses in such transactions. Hence dealers are in a position where every change in rates on call money, with which they usually operate, is a matter of grave importance, and the scope of their operations is immediately influenced by such changes. When, as in the New York market, dealers are often dependent upon loans obtained directly from the federal reserve bank, the open market rates of the latter directly determine the extent of such dealings.[20] It is admittedly a far cry from this type of control to the sort of control that is concerned with the amount of credit to be granted to manufacturers for expanding industrial equipment or to farmers and stockmen for growing crops or raising live stock. The problem of how to establish such control is a very different one and a difficult one, but that is not saying that it ought not to be done. The question is—how best to do it.

[19]Note also provisions of Edge act (1919).
[20]Sales made under 15-day repurchase agreements are thinly disguised loans.

It might as well be admitted that such an all-embracing type of credit policy seems highly improbable of attainment under existing conditions, given the fact that the federal reserve banks have had such limited powers of control even within the restricted field assigned to them by law. But unless a goal, no matter how remote it may seem, is consciously set, there are no consistent standards by which to judge the expediency or significance of proposed modifications of law and policy that will have to be considered from time to time. Some of the immediate obstacles in the way of control over member bank rate charges have already been alluded to. Proposals designed to overcome this lack of responsiveness should fit into a general scheme of policy, instead of being opportunistic devices to meet the needs of the moment. The evidence goes to prove a very general lack of relationship between rediscount rates and the rates paid by the public to member banks. In some instances, member banks are in the position of minor monopolists who charge what the traffic will bear; and there are sections of the country in which it will bear 10, 12 or 14 per cent. In parts of the country where it is not feasible to put the rediscount rates of the federal reserve banks above rates charged by member banks, there should be a steady drive against such rates in the form of a refusal to rediscount for banks making excessive charges, or else in the shape of direct loans to overcharged borrowers, because a rediscounting agency such as the federal reserve system cannot have any effective control over credit policy, even in a period of credit expansion, so long as it has no influence over the rates charged to the general public. When the member banks have surplus reserves, it is quite obvious that a pure rediscounting agency loses all control over the amount of credit supplied to the public and over the rates at which it is furnished. The conclusion is that a rediscounting agency as such can never control a credit situation through rate changes, when it sells its credit at rates below the rates charged to the public. Under such circumstances, its only method of control in a period of expanding business, is rationing. In a period of declining business its rôle is passive. In order to enforce its policies, therefore, the federal reserve system must extend the scope of its direct dealings with the public (*i. e.*, its open market operations). It was suggested in a previous paper that the bill market was not the only one to which the resources of the system could be safely and effectively applied. It was contended that commercial paper and loans against salable securities might very well be added to the category of paper obtained directly, not with a view simply to employing the resources of the system but with intent to put it in a position more effectively to influence member bank activities and to bring about equitable rate adjustments when the market mechanism was not working adequately and it was felt

that particular groups of borrowers were either undersupplied or oversupplied with funds. It is not without significance in this connection to note that the Federal Reserve Board in its annual report for 1921 emphasizes its lack of direct dealings with the public in refuting critics who have imputed to it responsibility for deflation and business depression.[21] This lack of direct contact with the borrowing public must be recognized as a very real limitation upon the responsibility of the board either for credit expansion or for contraction. But this very fact is an argument for the extension of direct dealings and for that reason strong objection can be made to a recent statement of the Advisory Council (January, 1922) to the effect that "the federal reserve system......must not be permitted to deal with customers direct and thereby incur the risk of immobilizing its funds in credits that may conceivably become frozen. Whatever relief the federal reserve banks may furnish must, therefore, be granted through the intermediary and under the responsibility of banking channels."

As a matter of fact, the question whether the direct lending activities of the federal reserve system ought to be extended has been more or less debated in connection with a discussion of agricultural credits. The bill now pending in Congress which seeks to meet the demand for an intermediate type of agricultural loans does not, however, provide for any direct grant of loans by the reserve banks. On the contrary, it would remove them one step farther away from the borrowing public so far as this particular type of agricultural lending is concerned. The bill provides for the establishment of credits departments in the federal land banks whose function it will be to furnish farmers and live-stock men with loans running from 6 months to 3 years. Paper taken by these credits departments from banks, incorporated live-stock companies, and coöperative associations of agricultural producers is made eligible for rediscount with the federal reserve banks when it is within six months of maturity. The reserve banks may also buy debentures issued by the federal land banks still having six months to run. Although these provisions of the bill are permissive, not mandatory, there is no arrangement made for subordinating the activities of the new organizations in a way to make them conform to the general policies of the federal reserve system. It would indeed be entirely possible for the two groups of institutions to work in opposition to each other.

The Agricultural Conference which held sessions in Washington in January gave its support to more radical recommendations which would permit the federal reserve banks to make direct loans to agriculturists without intervention of intermediaries and to buy short-time

[21] *Cf. Eighth Annual Report of the Federal Reserve Board,* pp. 90-99.

debentures without the restrictive six-months provision. But these recommendations are no more—even less—acceptable than the ones just discussed, because they are definitely discriminatory. The proposal to make such direct loans is not part of a general policy of expanding open market operations. It has the character of a special favor, granted to particular classes of producers and, as such, would be liable to lead to abuse of privileges and misdirection of credit grants. In this plan also there is no hint of a desire to subordinate the federal land bank system to the federal reserve system with a view to developing a harmonious policy.

Prussian experience in attempting to provide credits on a suitable and reasonable basis to agriculturists and also to small business interests offers many valuable suggestions for the solution of the American problem of agricultural credits. The Prussian agriculturist was provided with a subsidized centralized government agency, the Preussenkasse, as a means of access to the credit facilities of the banks in the leading money centers for the financing of his short-time credit needs. This government lending agency was not only in possession of funds provided by the government, but it was able to dispose of paper of the various coöperative unions subsidiary to it and in that way obtain funds at reasonable rates for the use of its membership. It furthermore at times rediscounted with or obtained loans from the Reichsbank when the outside market was not favorable. There was a good deal of complaint to the effect that the bills rediscounted by it with the Reichsbank were purely in the nature of accommodation bills and represented fairly long-term loans. The Reichsbank, however, was not ruined by its practice of taking such paper; neither did the credit structure of the country collapse. But there was undeniably friction due to the fact that the president of the Preussenkasse was entirely independent of the Reichsbank management, and that his operations were at times calculated to interfere with the Reichsbank policy. There was also complaint at times from the industrialists that the agriculturists could, as a result of governmental policy as made effective through the Preussenkasse, get loans at stable and low rates even when the big industrialists and speculators were paying high.[22]

The lesson of German experience appears to be that it is possible to make adequate and cheap provision for agricultural loans but that responsibility for the provision of such credits ought not to be given over to an institution that is independent of the central bank management. In the United States the establishment of a special central organization to care for agricultural needs would be even more pro-

[22] *Cf.* W. Prion, *Das deutsche Wechseldiskontgeschäft* (Leipzig, 1907), sections relating to Preussenkasse.

vocative of trouble than in Germany for many reasons. The Preussenkasse, for example, did business with unions composed of coöperative groups organized for the purpose of obtaining loans that they were not able to secure directly. They were not reached by the large powerful banks and the countryside was not provided with small independent banks of the type found throughout the United States. There was more reason for building up a separate organization under such circumstances than there would be in this country where the organization of farmers into coöperative credit associations is a slow and difficult task, rendered all the harder by the fact that banks in the United States actually provide much of the relatively long-time and very long-time credits needed by the farmer.[23] Any central agricultural lending agency that may be established under government auspices in the United States will therefore have to do its principal business with the banks that rediscount with the federal reserve banks. Its operations in any case ought to be conducted within the limits set by a general policy and this becomes especially necessary when it has the same class of customers as have the central banks.

An emergency institution, such as the War Finance Corporation, for example, has had to conduct its operations chiefly by lending to banks instead of by making direct loans, and the lack of a definite agreement with the federal reserve banks has led to certain inevitable abuses. Complaint has been made with some evidence to support it, that banks have borrowed from the Corporation in order to pay their debts to the reserve banks, and have shown no disposition to become any more generous in their dealings with the public. Some of them have undoubtedly unloaded slow loans upon the Corporation which they could have continued to carry. In certain cases, the law designed to give the borrower the benefit of lower rates by providing that loans obtained through the agency of banks shall be negotiated at an advance not exceeding 2 per cent, has also been evaded through the addition of extra commissions. Control of credit by a method of indirection through intermediary lending agencies is difficult at best. It becomes well-nigh impossible if such intermediaries are permitted to obtain funds from two independent institutions that may be working to neutralize each other's activities. For administrative purposes only, a formal segregation from the federal reserve system of the agencies designed to bring about a more equitable distribution of agricultural credit may be deemed desirable. But it is very undesirable, if it involves independent policies in making loans, whether those

[23]*Cf. Letter of Secretary of Treasury Transmitting Fifth Annual Report of the Federal Farm Loan Board.* On p. 6 complaint is made that numerous farm loan associations have pursued a selfish policy. The original members having satisfied their own needs become virtually a closed corporation or else cease to function.

loans are long-time mortgage loans or relatively short-time credits. In the case of mortgage loans, flotations of new issues need to be carefully planned at convenient seasons and to be put out in amounts and under conditions pleasing to the central bank authorities. In making provision for the intermediate type of loans, problems relating to seasonal needs have also to be faced. Unless an agricultural lending agency is to keep possession of unused resources during a part of the year, it must be in a position to rediscount or to obtain loans directly from other banks in the money centers. Hence the provision that the proposed credits departments of the federal land banks shall be permitted to rediscount paper with the reserve banks. It is believed that this privilege should be accorded, subject to rigid control by the rediscounting agencies. In other words, the proposal is endorsed in so far as it is virtually a seasonal expansion of operations on the part of the central banks themselves through the medium of subordinate and only formally segregated agencies.

Reference has already been made to problems of credit control in relation to loans against stock and bond collateral. Through direct dealings in and rediscount of loans collateraled by securities, the reserve banks could make their influence felt most effectively in the general investment field. They would be enabled at discretion to curb or to encourage a diversion of purchasing power in that direction by raising or lowering the rates charged for carrying investment securities in relation to other types of loans. It is sometimes hard to see the reason for the prejudice against such loans. It appears again and again even in the comments of those who concede the advantages growing out of the existence of organized security markets which are dependent upon such loans. But, it is asserted, undue accommodation of this sort leads to excessive speculation. Admitting that undue speculation in securities, as well as undueness in all things, is evil, it is highly illogical to concede the advantages offered by the organized security markets to investors as well as speculators and then to treat the loans which make such activities possible as shameful things—to feel that apologies must be made for granting them. The truth is that an efficacious credit policy can be easily developed in this field. The effect of a policy of withdrawing or adding to credit supplies is startlingly apparent in its effect upon call rates, and volume of stock exchange turnover. Under ordinary conditions it is fairly safe to assume that stable and reasonable rates will keep speculative demands within limits although, in a boom period, control may have to be enforced by resort to more drastic methods. If speculation is socially useful, a proper policy should see that funds are supplied on reasonable terms in reasonable amounts. If the nature of the demand is such that the banks can and do take advantage at times of the speculator,

it is to the detriment not only of the latter but of the rest of the community. The federal reserve banks should take as much interest in proper provision of funds to meet this demand as any other. They could aid in making that provision when necessary through open market operations, if legally permitted to do so.

The discussion of credit policy has so far dealt with rate variations chiefly in relation to control of the total amounts of credit supplied. It may now be asked whether it should be the policy of the federal reserve system to attempt to maintain a low level of rediscount rates, and whether it ought to aim at uniformity and stability of such rates. So far as long-time movements are concerned, the question resolves itself into a discussion of the best means of credit control. The reserve banks may at times have to restrain expansion by rationing, for example, but if they eventually are put in a position to influence market rates, they may normally be able to influence credit movements by varying their rediscount rates. In such case, upward and downward rate movements are to be expected. As regards seasonal or sectional rate variations, however, the problem is a distinctly different one. To the exent that seasonal demands for credit are regular and can be anticipated, the ends sought to be achieved by the establishment of a central banking system with an "elastic" currency are defeated, if the seasonally increased demands are accompanied by rate increases. Additional credit supplies to meet regularly recurrent needs ought not to involve additional expense to borrowers.

It is believed, too, that uniformity of rediscount rates as between districts should be aimed at by the federal reserve system, although it is recognized that the present imperfect control over member banks in high-interest districts may make it desirable to postpone the consummation of any such ideal. However, this is not a very strong argument, for in such districts the supply of credit which the reserve banks are prepared to furnish is the significant factor, and it is well known that rediscount rates have often been lower in districts where member bank rates on the average were very high than in sections of the country where interest rates were relatively low. Indeed it has never been possible to find a logical explanation for the differences in the rates actually enforced in the several districts, and it is notorious that relatively high rediscount rates in some districts induce member banks to borrow through their correspondents in other districts.

The relation of changes in discount rates to changes in the general level of prices is another question that has to be considered in any discussion of banking policy, especially as stabilization of the price level has been so frequently urged by Cassel and other writers as the objective of a right discount policy. It is, however, impossible to see

how any direct connection between the rates of the reserve banks and the general level of prices can be postulated, so long as member bank rates fail to register changes in rediscount rates. But even if member bank rates were responsive, it is not believed that there would ever be that instantaneous, predicable response to rate changes which appears to be taken for granted by those who urge that price indexes shall be employed as a guide to discount policies. In the first place, an endeavor has already been made to show that the amount of credit wanted does not always adjust itself readily to changes in the price charged for its use. In other words, demand is very imperfectly amenable to control through changes in discount rates. With apathy on the part of borrowers, low rates may not stimulate sales of credit, whereas, when demand is feverish, it may require drastic advances to bring about the desired reduction. Furthermore, without altering the general price level so far as indexes reveal it, credit may be turned into new channels, so that new price relationships will be established which will react upon the demand for credit.

It is not intended to deny that in a period of over-rapid development of business and speculative activity, the rediscount rates of the reserve banks might be raised high enough to place an effective check upon further credit expansion. But it has been pointed out that in many parts of the United States, the interest rates charged by member banks to their customers are at all times maintained at high levels. Therefore, in order to put a stop to the rediscounting activities of such banks in a period of growing business demand, the rates charged by the reserve banks would have to be in excess of what would be economically expedient (leaving out of consideration the obstacles that would be raised by public hostility to the policy). When member bank charges are too excessive to make it practicable to put rediscount charges on a level with them or above them, the alternative method of controlling the amount of credit supplied is by rationing or refusal to lend. When the rediscounting facilities of the reserve banks are not in demand, the central banking system will not in any case be enabled to enforce a credit policy by changes in rediscount rates. Under such circumstances, it can only exert an influence upon the outside market, if permitted to engage in direct lending operations as previously indicated.

At best, changes in discount rates are but a means employed to control the amount of credit supplied. The vital question is to decide how much credit shall be furnished. It may be asked whether formal reserve requirements are a good test for this purpose. Certainly such requirements are, theoretically speaking, irrelevant from the standpoint of those economists who conceive of credit as a refined form of barter which, if used in the process of exchanging goods, can

never become excessive. If one looks simply to goods, which means goods values, loans can be continually enlarged with excellent conscience by bankers, during periods of prosperity. No canons of sound banking need be violated and the banker cannot be blamed for resultant price rises. In the past, rigid reserve requirements have at least limited this upward movement and that is why they have a certain value despite their arbitrariness.

At the present time, the credit supply of the United States is, for all practical purposes, unlimited so far as reserve requirements are concerned. These requirements do not restrict the activity of member banks since reserves can be expanded so long as the federal reserve banks consent to rediscount. Moreover, fear that cash payments may be demanded in excess of ability to pay (ordinarily a constraining factor even if there are no legal reserve regulations) no longer exists, since rediscounts can be obtained in the form of reserve note issues. The law does place a limit to the expansion of the liabilities of the federal reserve banks themselves on the basis of reserves held, but the limitation is not absolute although it might under circumstances be useful as a protection against political importunity. At present the reserves of the system are so abundant, however, that they are a menace rather than a protection to a conservative credit policy.

The relation of discount policy to the control of gold movements is also of no practical importance at this time, although in the past European discount policy has been chiefly devoted to attempts to control international gold movements. Perhaps that is the reason why a study of central bank practice in other countries has thrown so little light on problems of domestic credit policy. If the views already set forth are accepted, it must be conceded that control of gold movements comes to be a subordinate affair. If or when the gold standard is reëstablished in international dealings, the best policy for the federal reserve banks to pursue would be to ignore minor gold movements in the belief that the system has enough surplus gold to withstand temporary drains. If heavy withdrawals of a persistent sort occur, the question of discount policy becomes a different and more formidable one. A movement of this sort resulting from domestic inflation which has stimulated imports and discouraged exports calls for higher rates in the interest of credit contraction, but such higher rates should be imposed not because of the gold movement but because the gold movement is an index of the need for credit restriction within the country.

If the manipulation of discount rates with a view to stabilizing the general price level appears to be an unworkable formula, if reserve requirements have lost any significance they may have possessed, and if gold movements have become of subordinate importance, is there any

guide to credit policy that can be adopted? There is certainly no rule or set of rules that can be applied mechanically because the problem is too complex and too tremendous. What is needed first of all is a fuller knowledge and better analysis of the physical facts of industry, and until that is achieved, there is no device known to credit policy that will greatly mitigate the evils due to the periodical ups and downs characteristic of a credit economy. How can a complex industrial society almost entirely dependent upon the use of credit be intelligently guided or controlled when the basic facts concerning current production and current needs are so imperfectly known? A beginning has been made with the systematic collection of production statistics and the organization of business reporting services on a disinterested, scientific basis. But the information made available can hardly have offered much help to bankers as a guide to credit policy because so far reporting services have either been confined to statistics of production without adequate analysis of markets or else they have had a fatalistic aspect, predicting what is going to happen on the basis of past experience (for that is all that is achieved by plotting lines of secular trend). So far as this latter type of reporting service is concerned, it may be conceded that it is interesting to forecast on the basis of a careful assembling and analysis of facts about what stage has been reached in the cycle of prosperity or depression through which business is passing. But a business reporting service to be of use to the public, to industry, and to the banks must offer something more than solace to the inquiring mind. Business statistics are not particularly valuable merely as an aid to guessing where we are in the business cycle or as a means of enabling the astute either to take chances successfully or to get out from under. If business conditions reports are to be used as a guide to credit policy they will have to disseminate information with a view to mitigating the violence of industrial ups and downs by preventing productive maladjustments due to ignorance of market conditions.

Reporting services that emphasize only the productive facts of industry are equally unable to meet this need. During a period of business expansion, a wonderful showing may be made in volume as well as in value of output. It was made during the recent months of prosperity. Business conditions reports dealing in production and sales figures radiated enthusiasm. Scarcity and the need for increasing output were everywhere emphasized. Complaints of the inadequacy of permanent equipment and admonitions to save to provide that equipment were the stock in trade of the business moralist. The trouble with all these sales and production figures was that, although real enough and seemingly substantial even allowing for inflated values, they were an index to expectations—they had still to stand the test

of effective final demand. Such statistics need to be judged in the light of an elaborate study of markets.[24] It is necessary to know not only how much has been produced but whether there is likelihood of the demand being great enough to take off the supply at a profitable price. Likewise in case of a sudden failure of demand, it is necessary to face the vexing question of how far it is legitimate to withhold surplus supplies from market for the sake of higher prices later. The solution of this problem requires a knowledge that goes beyond production statistics. Suppose, for example, that the supply of a certain commodity is "normal" but some ill chance renders a good part of the usual demand ineffective. Confusion of counsel results. One group of advisers says sales must be forced and debts paid—to delay is to speculate for a price rise. Another group urges holding with a view to obtaining eventually the prices originally hoped for, irrespective of the nature of the causes that have destroyed the market demand. The dangers of yielding to either type of extreme counsel are perfectly obvious. In the one case, forced sales on an already falling market bring crushing and undeserved losses to certain groups of producers. In the other case, holding, if successful, may mean a policy of restriction of supply at the expense of the whole community with the result of turning over a greater part of the social income to a particular group. If the withholding is carried to an unreasonable extent

[24]It is interesting to note the insistence of members of the Agricultural Conference (Washington, January, 1922) upon the need for full and frequent statistics relating not only to agricultural production but also giving information as to the stabilization of the markets for products. This points to a general recognition of the fact that no plan to stabilize prices of particular commodities can hope to succeed simply by enlarging, changing, or liberalizing the existing credit system. So long as the supply of agricultural commodities is in excess of demand at remunerative prices, it is recognized that any attempt at stabilization is capable of only limited application at best. So long as producers are ignorant of the markets open to them and unable to estimate the scope of the consumptive demand, sharp advances and declines in prices are certain to occur. It is admittedly difficult to adjust production to demand in the case of agricultural products which are so greatly affected by circumstances over which the producer has no control, but there has come to be a very general recognition of the fact that more adequate statistics would at least give a greater measure of control over output and prices. Therefore the Conference expressed its conviction that there was need for a knowledge of foreign as well as domestic buying demand and endorsed participation in a conference looking toward the economic and financial reconstruction of Europe. The recommendations of the Committee on Agriculture and Price Relations stated among other things that, "owing to the large volume of American agricultural products which must necessarily be sold upon foreign markets, it is impossible to formulate a satisfactory policy for American agriculture without a complete knowledge of the course and direction of recovery of agricultural production abroad." It recommended therefore that the Department of Agriculture proceed to make periodically available information with respect to production and demand. The Conference also approved thirty-seven recommendations of the Committee on Crop and Market Statistics requesting the compilation and distribution of returns on production, stocks, condition, prices, and other factors entering into the marketing of crops and live stock.

it not only penalizes all consumers of such products but may defeat its own ends by merely deferring the day of reckoning. Such problems are much more complicated in a period of general but unequal price declines than they are when limited to particular commodities. In the latter case there are usually standards of fairness and reasonableness whose maintenance can be urged. In the former case the only standards are those of relativity. If therefore any reasonable guide to action is to be found, there must be a painstaking study of all the factors involved. Not only must supply on hand and in prospect be appraised, but demands must be forecast. An effort must be made to find out whether reduction in buying demand is of a temporary or of a permanent sort—whether it is limited by physical needs or responsive to price changes. Only then can a policy of price equalization by means of credit extension be intelligently undertaken with a view to spreading price losses over the community as a whole. Mistakes cannot be avoided as only omniscience could prevent their being made, but at least the policy adopted will not be haphazard.

The untenable results reached by insistence upon the desirability of physical increase in production without reference to the relation of production to effective demand is strikingly illustrated in the answer of the Federal Reserve Board to the Senate resolution of May, 1920, asking what steps were being taken to control inflation. In its answer the Board stated: "Every effort should be made to stimulate necessary production, especially of food products, and to avoid waste. Planting operations in many sections have been delayed because of adverse weather conditions, and should there be an inadequate yield of crops this year the necessity for conservation and conservatism will be accentuated. War waste and war financing result inevitably in diminished supplies of goods and increased volume of credits. The normal relationship between the volume of goods and the volume of money and credits thus unsettled can be restored in either of two ways—one, the drastic method of contraction of credit, and the other, by far the more desirable way, increased production. In the same way progress toward the restoration of the normal relationship may be made by reducing credit more rapidly than production is diminished, or by increasing production at a greater rate than credit is expanded. If it should prove impracticable in the existing circumstances to increase essential production, then we must through economy in consumption and through moderation in the use of credit check the tendency toward a further widening of the margin between goods and credit."[25] When

[25]Elsewhere in this same statement it is made to appear that trade and industry must after all "accommodate themselves to the actual supply of capital and credit available." Capital in this connection probably means savings deposits, as the preceding sentence says: "There is a world-wide lack of capital, and with calls upon

this statement was made, the problem of disposing of surplus stocks of commodities at prevailing prices was already becoming acute. The hope here expressed that large crops will be raised is in sharp contrast with the rejoicings over the short cotton crop of the past year.

But quite apart from the question whether it is desirable to produce more, the statement contains a fallacy in that it appears to indicate that production can as a matter of volition be increased or decreased while the volume of bank credit remains stationary or else expands or contracts at quite different rates. So far as bank policy is concerned, however, the effect on production of increasing credit supplies can only be felt through price changes in particular goods due to the diversion to their purchase of more credit or purchasing power. By raising the prices of such goods in relation to other goods, banks stimulate the production of specific kinds of commodities. But only to the extent that these shifts of purchasing power bring about a better adjustment of productive factors, is any influence exerted on the sum total of produced output. That is why accelerated activity in lending usually reflects itself in price increases. Only as factors over which policy has little or no control increase or decrease the volume of physical output, is this tendency to price increase counteracted or enhanced. Among such factors may be mentioned good weather or bad, making for large or small crops; industrious application or negligence, making for more or less output per worker; rate of growth in population; pace of invention, etc. Consequently it is useless to urge increased production as an alternative to credit contraction as a means of correcting the ravages of inflation. If inflation is to be stopped, it has to be at some cost. It is always accompanied by undue stimulation of some types of productive activity and when policy calls a halt, sharp drops in prices of such commodities will occur, which will have as a corollary the demoralization of the markets for other goods and services. The policy of extending credit to the holders of surplus stocks may for a time enable their owners, so to speak, to escape loss by purchasing their own goods. But eventually the fact of maladjustment will have to be faced. It will have to be recognized that there is no outside market to absorb goods at prevailing prices. If through policy it were possible to enlarge supplies of goods at such a time on the theory that the possession of goods constitutes an effective demand for goods, the confusion would be worse confounded. Prevention through knowledge—not succor following disaster—is the goal of a successful credit policy.

the investment market which cannot be met there is an unprecedented demand for bank credits." This suggestion that capital and credit are fixed quantities is surely in contradiction to the admonition to manipulate the amounts outstanding in order to introduce new relationships between goods and credit.

An effective credit policy in the nature of the case implies a measure of monopolistic control. Hence there is need for delegating that power of control to a disinterested central banking management, whose policy is unhampered by considerations of profit. The provision of credit in economically advanced countries has come to be as public—possibly more public in its nature—as the issue of money by governments. Hence there is no escaping the demand that a credit system shall be managed in the interest of all the people, that credit supplies shall be available on equitable terms to all sections and to all economic groups. A central banking system which tries to limit its operations to particular types of credit advances is only functioning imperfectly. The credit policy of the future must recognize responsibility for seeing that a balance is maintained among all types of demand for credit.

In conclusion, the chief points covered may be summarized as follows: (1) An attempt is made to define capital and interest in a workable and consistent manner with a view to making the definitions valid for the purposes of a discussion of discount and credit policy. (2) The position is taken that banks are creative institutions that do not function automatically in a ready-made economic milieu, although their activities are necessarily conditioned by environment. (3) Reasons are given to support the belief that a credit policy to be efficacious must embrace all types of credit operations, both long-time and short-time (investment and commercial). (4) Limits to the efficacy of changes in discount rates are discussed, both in general and more particularly in the case of the federal reserve banks; and it is maintained that the influence of rate changes as a means of credit control has been exaggerated. (5) The defects of various proposed guides to credit policy are reviewed and the need for fuller information in regard to the facts of industry is stressed.

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